



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/728,870	12/08/2003	Che-An Chang	MR2723-330	1172
4586	7590	12/30/2005		
ROSENBERG, KLEIN & LEE 3458 ELLICOTT CENTER DRIVE-SUITE 101 ELLICOTT CITY, MD 21043			EXAMINER COUGHLAN, PETER D	
			ART UNIT	PAPER NUMBER
			2129	

DATE MAILED: 12/30/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/728,870

Applicant(s)

CHANG ET AL.

Examiner

Peter Coughlan

Art Unit

2129

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 December 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12/8/2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Detailed Action

1. Claims 1-9 are pending in this application.

35 USC § 101

2. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 1-9 are rejected under 35 U.S.C. 101 for nonstatutory subject matter. If the “acts” of a claimed process manipulate only numbers, abstract concepts or ideas representing any of the foregoing, the acts are not being applied to appropriate subject matter. Schrader, 22 F.3d at 294-95, 30 USPQ2d at 1458-59. See MPEP 2100-12.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claim 7 rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it

Art Unit: 2129

pertains, or with which it is most nearly connected, to make and/or use the invention.

Auto-balance is not defined within the specification. Along with the misunderstanding of how two or more processors performing the same function is a 'balance' which aids the applicant's invention. The phrase 'mutual balance' is not defined in the specification.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cohen et al in view of Petrushin, and further in view of Aylmer, and further in view of Carter, and further in view of Haggerty (U. S. Patent 6477595, referred to as **Cohen**; U. S. Patent Publication 20030033145, referred to as **Petrushin**; U. S. Patent Publication 20030212623, referred to as **Aylmer**; U. S. Patent Publication 20030051026, referred to as **Carter**; U. S. Patent 6331983, referred to as **Haggerty**).

Claim 1.

Cohen teaches a build-in communication module, which is a duplex communication module programmed and burned in the system EPROM, wherein parameters can be configured by the user to generate a corresponding server program for receiving the outstanding data from the network (**Cohen**, C2:12-19, C1:10-14 and C9:40-65); a data dispatcher, which receives data from the communication server, and dispatches the data according to its format to a certain modular data processor (**Cohen**, C9:40-65; Examiner's Note (EN) 'Server program' of applicant is equivalent to 'TFTP server' of Cohen.).

Cohen does not teach a build-in database access module, which is utilized, when the modular data processor need to access the data of the database, to communicate with the external database using the build-in database access module; a data register, whose function lies primarily in detaching each module with various functions from the modular data processor and facilitating data exchange with each other in the presence of data registers to raise the common function of the modular data processor; an internal & external device, whose major function comprises of connecting the modular data processor to the system, reading the data from the system for carrying out the interpreting operation, transferring data through the device and other modular data processors, or returning the result to the system; a modular data processor, provided with a small-scale CPU (central processor modular) and memory, wherein the user can transcribe the application system to the modular data processor for execution, and plug

the modular data processor in the device for carrying out the data input and output via the device; a simple operating system, exhibiting no complex features associated with the conventional operating system, and comprising just a simple function for system startup, loading the build-in modules, environment initialization and maintaining the configuration file present in the static memory; and a system monitor, for checking through the internal status of the system and system devices, or for modifying the configuration parameters via the system monitor tools if requires.

Petrushin teaches a build-in database access module, which is utilized, when the modular data processor need to access the data of the database, to communicate with the external database using the build-in database access module (**Petrushin**, ¶[0381]). It would have been obvious to a person having ordinary skill in the art at the time of applicant's invention to modify teachings of Cohen by having a device that allows access to a database that is local or through a network as taught by Petrushin to have teaches a build-in database access module, which is utilized, when the modular data processor need to access the data of the database, to communicate with the external database using the build-in database access module.

The purpose being is to have access to large amounts of data in databases that can be local or through a network.

Petrushin teaches a data register, whose function lies primarily in detaching each module with various functions from the modular data processor and facilitating data exchange with each other in the presence of data registers to raise the common

Art Unit: 2129

function of the modular data processor (**Petrushin**, ¶[0139]; EN 'detaching' of functions of applicant can be done with a neural network of Petrushin. In applicant's view, a data register makes the decision on which functions to keep in order to solve a problem.

Petrushin has a parallel design with the neural network that recognizes emotions in speech.). It would have been obvious to a person having ordinary skill in the art at the time of applicant's invention to modify teachings of Cohen by having a design of a system such that with a given inputs, more than one outputs can result as taught Petrushin to have a data register, whose function lies primarily in detaching each module with various functions from the modular data processor and facilitating data exchange with each other in the presence of data registers to raise the common function of the modular data processor.

For the purpose of having more than one outcome mirrors the desired result of having more than one combination of functions.

Petrushin teaches a internal & external device, whose major function comprises of connecting the modular data processor to the system, reading the data from the system for carrying out the interpreting operation, transferring data through the device and other modular data processors, or returning the result to the system (**Petrushin**, ¶[0050], ¶[0369], ¶[0381], and ¶[0408]; EN The bus, TFTP server, and the interface circuit connects all these areas.). It would have been obvious to a person having ordinary skill in the art at the time of applicant's invention to modify teachings of Cohen by having a module that makes all the necessary connections as taught by Petrushin to have a internal & external device, whose major function comprises of connecting the

modular data processor to the system, reading the data from the system for carrying out the interpreting operation, transferring data through the device and other modular data processors, or returning the result to the system.

For the purpose of utilizing all the functional modules, there must be a connection between all of the modules.

Petrushin teaches a modular data processor, provided with a small-scale CPU (central processor modular) and memory, wherein the user can transcribe the application system to the modular data processor for execution, and plug the modular data processor in the device for carrying out the data input and output via the device (**Petrushin**, ¶[408]). It would have been obvious to a person having ordinary skill in the art at the time of applicant's invention to modify teachings of Cohen by having the basic needs of a computer as a CPU and memory which the CPU needs as taught by Petrushin to have a modular data processor, provided with a small-scale CPU (central processor modular) and memory, wherein the user can transcribe the application system to the modular data processor for execution, and plug the modular data processor in the device for carrying out the data input and output via the device.

For the purpose of being able to process the information as it arrives.

Petrushin teaches a simple operating system, exhibiting no complex features associated with the conventional operating system, and comprising just a simple function for system startup, loading the build-in modules, environment initialization and maintaining the configuration file present in the static memory (**Petrushin**, ¶[0408]). It would have been obvious to a person having ordinary skill in the art at the time of

Art Unit: 2129

applicant's invention to modify teachings of Cohen by having an operating system to coordinate the basic functions of the CPU and memory as needed as taught by Petrushin to have a simple operating system, exhibiting no complex features associated with the conventional operating system, and comprising just a simple function for system startup, loading the build-in modules, environment initialization and maintaining the configuration file present in the static memory.

For the purpose of having a separate system to handle the basic computing needs of the CPU and memory.

Petrushin teaches a system monitor, for checking through the internal status of the system and system devices, or for modifying the configuration parameters via the system monitor tools if requires (**Petrushin**, ¶[0242] through ¶[0244]; EN In these three paragraphs, Petrushin illustrates a step process where modification command is looked for. If it is received then it is processed.). It would have been obvious to a person having ordinary skill in the art at the time of applicant's invention to modify teachings of Cohen by having the ability to modify parameters as taught by Petrushin to have a system monitor, for checking through the internal status of the system and system devices, or for modifying the configuration parameters via the system monitor tools if requires.

The purpose being is to have a robust system where it can change parameters to achieve an improved result.

Claim 2.

Cohen and Petrushin do not teach said protocol module of said build-in communication module includes TCP/IP, X25, ASYNC, SNA (a proprietary protocol of IBM computer product series). Aylmer teaches said protocol module of said build-in communication module includes TCP/IP, X25, ASYNC, SNA (**Aylmer**, ¶[0179], ¶[0181] and ¶[0183]). It would have been obvious to a person having ordinary skill in the art at the time of applicant's invention to modify combined teachings of Cohen and Petrushin by using established protocols for communication as taught by Aylmer to have a protocol module of said build-in communication module includes TCP/IP, X25, ASYNC, SNA.

For the purpose of using established communication protocols enables the system to communicate with other systems.

Claim 3.

Cohen teaches the integration capability of the processor can be directed against the modular data processor developed by various software and hardware vendors, and the primary input/output data format is the only thing need to be recognized such that it can be referenced by other modular data processors even after several years (**Cohen**, C5:42-49).

Claim 4.

Cohen, Petrushin and Aylmer do not teach generation of the data register is created by the system automatically by creating a block in the memory according to the

Art Unit: 2129

requirements recorded in the data format & the device name file, and copying the memory address of the block into the data format & device name file. Carter teaches generation of the data register is created by the system automatically by creating a block in the memory according to the requirements recorded in the data format & the device name file, and copying the memory address of the block into the data format & device name file (**Carter**, ¶¶[0175] and ¶¶[0256]). It would have been obvious to a person having ordinary skill in the art at the time of applicant's invention to modify combined teachings of Cohen, Petrushin and Aylmer by having a dynamically generated data register as parameters require as taught by Carter having the ability of generation of the data register is created by the system automatically by creating a block in the memory according to the requirements recorded in the data format & the device name file, and copying the memory address of the block into the data format & device name file

For the purpose of having the correct data register developed for a given set of requirements is efficient in data processing and accurate in terms of the correct data register design.

Claim 5.

Cohen teaches said internal device is connected directly to the board and the chassis via the electronic circuit (**Cohen**, C8:38-51).

Claim 6.

Cohen teaches said external device is designed to connect to the system via circuit lines for future expansion (**Cohen**, C5:42-49; En 'Circuit lines' of applicant is equivalent to 'Ethernet technology' of Carter.).

Claim 7.

The combination of Cohen, Petrushin and Aylmer do not teach the function of said data register enables the modular data processors with the same function to access the data in the same address, and thus achieve the functions of auto-balance load and mutual backup. Carter teaches the function of said data register enables the modular data processors with the same function to access the data in the same address, and thus achieve the functions of auto-balance load and mutual backup (**Carter**, ¶[1096]; EN 'Auto-balance' of applicant is equivalent to 'programs in parallel' of Carter.). It would have been obvious to a person having ordinary skill in the art at the time of applicant's invention to modify combined teachings of Cohen, Petrushin and Aylmer utilizing the multiple processors as taught by Carter to have the function of said data register enables the modular data processors with the same function to access the data in the same address, and thus achieve the functions of auto-balance load and mutual backup.

The purpose being is to split the amount of work of a given problem and forward the divided work between two or more processors that can handle the same type of problem in order to achieve an increased speed.

Claim 8.

Cohen does not teach an artificial neuron computer system comprises a design framework. Petrushin teaches an artificial neuron computer system comprises a design framework (**Petrushin**, ¶[0139]). It would have been obvious to a person having ordinary skill in the art at the time of applicant's invention to modify teachings of Cohen by implementing a neural network as taught by Petrushin to introduce an artificial neuron computer system comprises a design framework.

For the purpose of taking advantages that a neural network has in its design.

Cohen teaches any computer in the same group received an un-interpretable data, the computer can find out, from the group of computers, the modular data processor capable of interpreting the data format and processing by the function of mutual learning in the group of computers (**Cohen**, C5:42-49; EN With all the computers being connected, when any computer receives un-interpretable data, the information can be sent to the 'artificial neuron computer system' which then decides which processor(s) to send the problem to.).

Claim 9.

Cohen, Petrushin, Aylmer and Carter do not teach each computer in the group, at starting up, exchanges mutually the data format & device name file with other computers in the same group such that it is easy to know every computer in the group including which device in each computer can process which kind of data format, and that the system actively inform every computer in the group if any change occurs to

achieve the status update. Haggerty teaches each computer in the group, at starting up, exchanges mutually the data format & device name file with other computers in the same group such that it is easy to know every computer in the group including which device in each computer can process which kind of data format, and that the system actively inform every computer in the group if any change occurs to achieve the status update (**Haggerty**, C1:37-42 and Fig. 3B; EN 'Data format' of applicant is equivalent to 'frame data' of Haggerty. 'Device name file' of applicant is equivalent to 'source MAC address (158)' of Haggerty. 'Actively inform every computer in the group' of applicant is completed by the fact that Ethernet is a broadcast system and this is handled by 'IP Multicast address (174)' of Haggerty.). It would have been obvious to a person having ordinary skill in the art at the time of applicant's invention to combined teachings of Cohen, Petrushin, Aylmer and Carter by using the basic elements that are in Ethernet to achieve exchanging data as taught by Haggerty have teaches each computer in the group, at starting up, exchanges mutually the data format & device name file with other computers in the same group such that it is easy to know every computer in the group including which device in each computer can process which kind of data format, and that the system actively inform every computer in the group if any change occurs to achieve the status update.

For the purpose of having processors that are not 'directly' connected have the ability to exchange information using an established protocol thereby lowering integration problems.

Conclusion

5. The prior art of record and not relied upon is considered pertinent to the applicant's disclosure.

-U. S. Patent 6085238: Yuasa

-U. S. Patent 5245703: Hubert

-U. S. Patent Publication 20030149603: Ferguson

-U. S. Patent 6233731: Bond

-U. S. Patent 6226371: Brune

-U. S. Patent 6195708: Sugimoto

-U. S. Patent 6085307: Evoy

-U. S. Statutory Invention Registration US H1964 H: Hoffpauir

6. Claims 1-9 are rejected.

Correspondence Information

7. Any inquiry concerning this information or related to the subject disclosure should be directed to the Examiner Peter Coughlan, whose telephone number is (571) 272-5990. The Examiner can be reached on Monday through Friday from 7:15 a.m. to 3:45 p.m.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor David Vincent can be reached at (571) 272-3687. Any response to this office action should be mailed to:

Commissioner of Patents and Trademarks,
Washington, D. C. 20231;

Hand delivered to:

Receptionist,
Customer Service Window,
Randolph Building,
401 Dulany Street,
Alexandria, Virginia 22313,

(located on the first floor of the south side of the Randolph Building);

or faxed to:

(571) 273-8300 (for formal communications intended for entry.)

Art Unit: 2129

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have any questions on access to Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll free).



Peter Coughlan

12/10/2005

